



**DEPARTMENT OF THE AIR FORCE**  
**UNITED STATES CENTRAL COMMAND AIR FORCES (USCENTAF)**  
**SHAW AIR FORCE BASE, SOUTH CAROLINA**

April 16, 2003

MEMORANDUM FOR CENTAF AOR Medical Units

FROM: CENTAF\SG  
APO AE 09871

SUBJECT: Prevention of Arthropod-Borne Diseases in Iraq

1. This policy is intended to ensure that arthropod-borne diseases are kept to a minimum in Iraq by educating and providing needed preventive chemoprophylaxis and arthropod repellents to all personnel who will have likelihood of exposures in this high-risk environment.

2. Malaria, dengue, leishmaniasis, sand fly fever, Crimean-Congo Hemorrhagic Fever (CCHF), and other arthropod-borne diseases present a threat to CENTAF personnel operating in Iraq. Malaria is transmitted through the bite of infected *Anopheles* mosquitoes. Malaria vectors typically bite at night, therefore bed nets are a vital part of a preventive program. Most malaria in Iraq is *P. vivax* malaria with a small portion being *P. falciparum* malaria. There are also reported to be pockets of chloroquine resistant malaria in Iraq. Dengue is transmitted through the bite of infected *Aedes* mosquitoes. Unlike *Anopheles* mosquitoes, *Aedes* typically bite during the day. Sand flies transmit leishmaniasis and sand fly fever, while the bite of an infected tick can transmit CCHF. CCHF and *P. falciparum* malaria can quickly become life-threatening illnesses.

a. The combination of personal protective measures (PPM), aggressive area vector surveillance/control, and chemoprophylaxis will be employed to prevent the transmission of arthropod-borne diseases. PPM are the primary means of avoiding bites from mosquitoes, sand flies, and ticks. Area control will be used when circumstances permit to eliminate breeding sites and kill adult vectors. Chemoprophylaxis is a last line of defense used to kill the malaria parasite if PPM measures fail. No one component of the strategy, including chemoprophylaxis, is 100 percent effective when used alone.

b. When operationally feasible, Public Health personnel operating in Iraq will conduct vector surveillance by counting and identifying collected arthropods. Mosquitoes collected will be sent via MILAIR or MPS to HQ USAFE/CEVQ, ATTN: Capt Stephen Wolf, Unit 3050, Box 10, APO AE 09094-5010 for further identification and analysis. Public Health will coordinate with Civil Engineering on vector control efforts. Units that encounter local foci of biting insects should request assistance from Public Health. Application of pesticides and elimination of insect breeding areas near troop populations are effective ways of reducing insect bite potential.

c. Malaria chemoprophylaxis is required for all personnel operating in Iraq for more than 3 consecutive days from April through November, unless medically exempted. Both mefloquine and doxycycline are approved malaria chemoprophylaxis agents for CENTAF personnel in Iraq. A dose of 250 mg of mefloquine given weekly or a 100 mg dose of doxycycline taken daily for personnel on flight status provides effective protection against malaria.

1) Prophylaxis with mefloquine should begin 1-2 weeks prior to entering Iraq (entrance into Iraq, April through November) and continue weekly on same day each week through the entire period of exposure to potentially infected mosquitoes plus four additional weeks following exposure.

2) Personnel on flying status or those with known sensitivity to mefloquine should instead begin prophylaxis with doxycycline one week prior to entering Iraq (April through November) and continue daily through the entire period of exposure to potentially infected mosquitoes plus four additional weeks following exposure. Medication should be ingested at approximately the same time daily with plenty of water. Individuals taking doxycycline should use sunscreen on exposed body areas due to risk of drug-induced sunlight sensitivity.

3) Because *P. vivax* malaria is a threat in Iraq, terminal prophylaxis with primaquine is required of all personnel who have been taking malaria chemoprophylaxis while deployed. Unless medically exempted, CENTAF personnel will take primaquine (15 mg daily for 14 days) soon after redeploying to a non-malarious area or whenever directed by competent medical authority. Documentation of G6PD status should be checked prior to dispensing primaquine terminal prophylaxis to avoid treatment of G6PD deficient personnel. If documentation is not available, G6PD deficiency testing should be done prior to starting primaquine. Single dose ground trial for personnel on flying status is required to rule out adverse reaction. DNIF not required unless flight surgeon deems appropriate in unusual cases.

3. PPMs are a vital component in the prevention of arthropod-borne diseases.

a. Personnel deploying into Iraq will treat uniforms with permethrin prior to deploying. Deployed units with untreated uniforms will ensure uniforms are treated with permethrin. Treatment of flight suits is not recommended. DCU and BDU uniforms, when treated with permethrin, are very effective at repelling biting insects and especially ticks, which may carry the CCHF virus. Uniforms treated with liquid permethrin (IDA kits) via the "dip" method can be washed about 50 times before re-treatment is required. The IDA kit is the recommended treatment method. The permethrin aerosol is also effective, but only lasts for a maximum of 6 washes. When properly worn, the uniform serves as an effective barrier to biting arthropods. For additional protection, tuck trousers into boots to prevent ticks from crawling underneath clothing. Sleeves worn in the down position provide added protection. The objective of proper uniform wear is to minimize the amount of skin area exposed to biting insects. This is especially important from dusk to dawn.

b. DEET insect repellent is the most effective skin repellent against mosquitoes on exposed skin; it will be applied to those areas of the body that remain exposed to mosquitos, ticks, and sand flies.

c. Personnel in Iraq are most likely to be bitten by sand flies and mosquitoes during the evening and nighttime hours. Bednetting, especially when treated with permethrin, provides an effective barrier to biting insects while sleeping. Bednets are not pretreated with permethrin and should be treated with one can of permethrin aerosol before use.

4. All personnel leaving Iraq should annotate on their DD Form 2796, Post-Deployment Questionnaire, that they have recently departed a malarious area. They should be educated on the requirement to take terminal malaria prophylaxis upon arrival at their home duty station or return to a non-malarious area.

5. Service support. Class VII needed to implement this policy will be distributed through supporting medical units in AOR.

6. Should you have any questions please feel free to call my point of contact: Major Sam Hall, at DSN 318-438-8080, [centaf.sgph@psab.af.smil.mil](mailto:centaf.sgph@psab.af.smil.mil) or [centaf.sgph@psab.af.mil](mailto:centaf.sgph@psab.af.mil). Thank you for your prompt implementation of this policy.

//Original Signed//

TIMOTHY T. JEX, Col, USAF, MC, SFS  
USCENTAF Command Surgeon